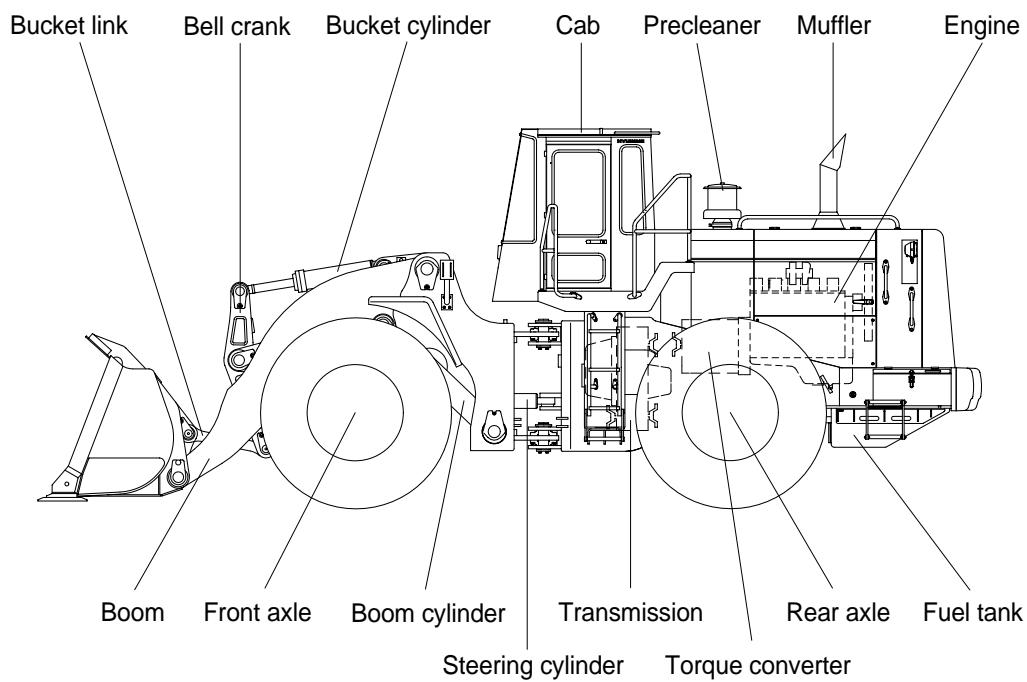
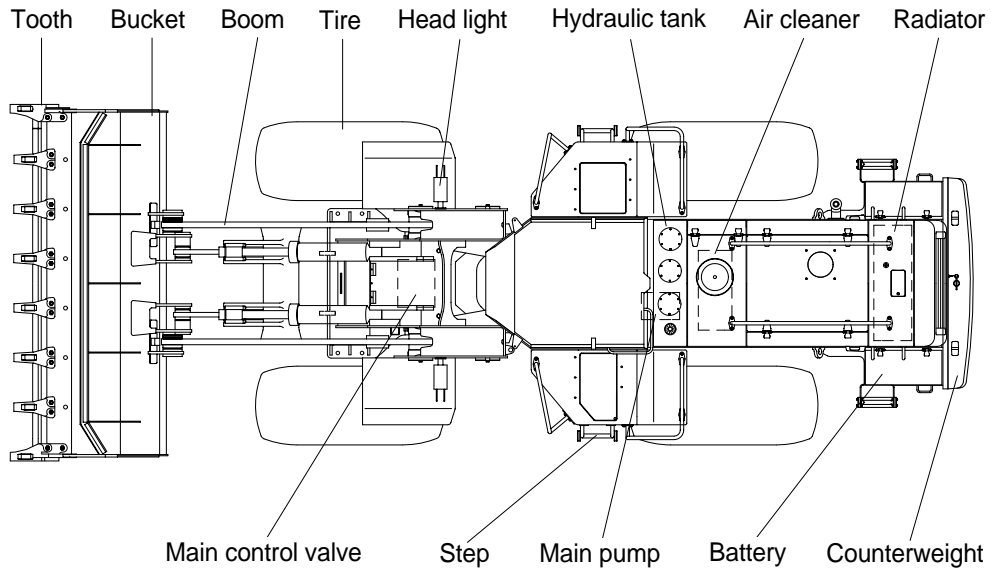


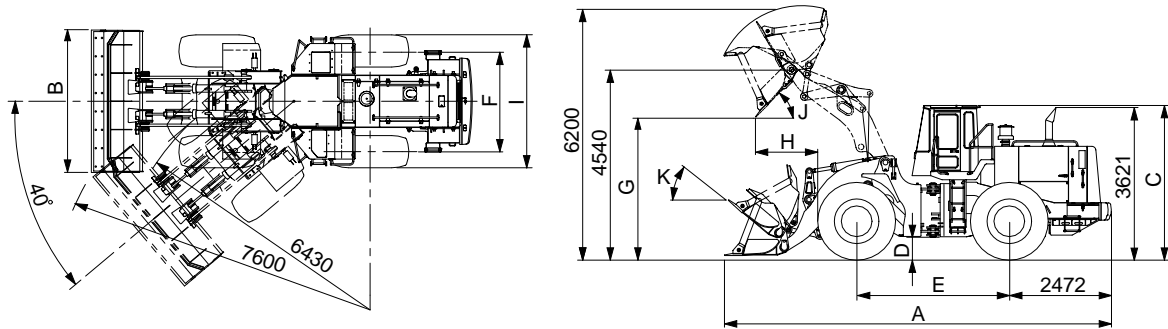
GROUP 2 SPECIFICATION

1. MAJOR COMPONENTS



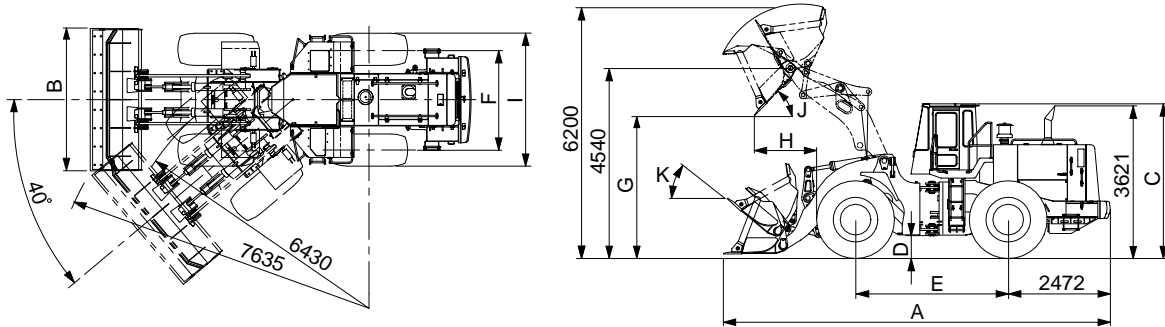
2. SPECIFICATIONS

1) WITHOUT TOOTH AND CUTTING EDGE TYPE BUCKET



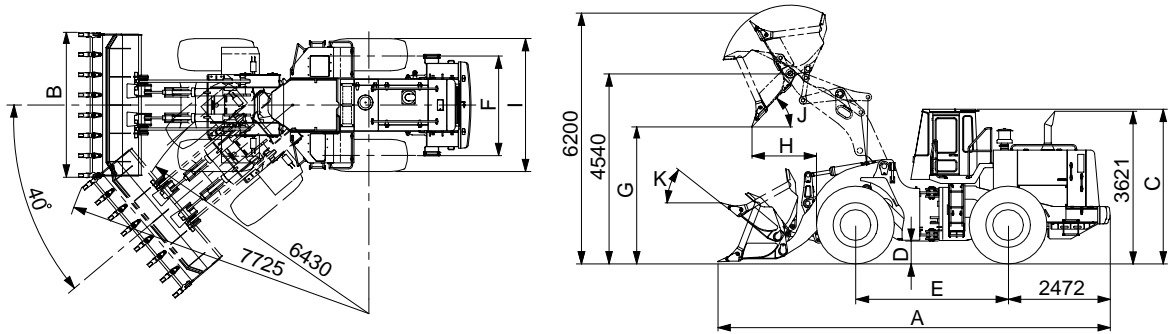
Description		Unit	Specification
Operating weight		kg(lb)	28715(63306)
Bucket capacity	Struck	m ³ (yd ³)	4.0(5.2)
	Heaped		4.7(6.2)
Overall length	A	mm(ft-in)	9195(30' 2")
Overall width	B		3450(11' 4")
Overall height	C		3670(12' 0")
Ground clearance	D		475(1' 7")
Wheelbase	E		3700(12' 2")
Tread	F		2440(8' 0")
Dump clearance at 45°	G		3480(11' 5")
Dump reach	H		1435(4' 8")
Width over tires	I		3220(10' 7")
Dump angle	J		Degree (°)
Roll back angle(Carry position)	K	48	
Cycle time	Lift(With load)	sec	6.4
	Dump(With load)		1.6
	Lower(Empty)		3.6
Maximum travel speed		km/hr(mph)	37.4(23.3)
Braking distance		m(ft-in)	12(39' 4")
Minimum turning radius(Center of outside tire)			6.43(21' 1")
Gradability		Degree (°)	30
Travel speed	Forward	First gear	7.6(4.7)
		Second gear	13.3(8.3)
		Third gear	22.3(13.9)
		Fourth gear	37.4(23.3)
	Reverse	First gear	7.6(4.7)
		Second gear	13.3(8.3)
		Third gear	22.3(13.9)
		Fourth gear	37.4(23.3)

2) BOLT-ON CUTTING EDGE TYPE BUCKET



Description		Unit	Specification	
Operating weight		kg(lb)	29000(63934)	
Bucket capacity	Struck	m ³ (yd ³)	4.2(5.5)	
	Heaped		5.0(6.5)	
Overall length	A	mm(ft-in)	9310(30' 7")	
Overall width	B		3450(11' 4")	
Overall height	C		3670(12' 0")	
Ground clearance	D		475(1' 7")	
Wheelbase	E		3700(12' 2")	
Tread	F		2440(8' 0")	
Dump clearance at 45°	G		3395(11' 2")	
Dump reach	H		1470(4' 10")	
Width over tires	I		3220(10' 7")	
Dump angle	J		Degree (°)	45
Roll back angle(Carry position)	K			48
Cycle time	Lift(With load)	sec	6.4	
	Dump(With load)		1.6	
	Lower(Empty)		3.6	
Maximum travel speed		km/hr(mph)	37.4(23.3)	
Braking distance		m(ft-in)	12(39' 4")	
Minimum turning radius(Center of outside tire)			6.43(21' 1")	
Gradability		Degree (°)	30	
Travel speed	Forward	First gear	km/hr(mph)	7.6(4.7)
		Second gear		13.3(8.3)
		Third gear		22.3(13.9)
		Fourth gear		37.4(23.3)
	Reverse	First gear		7.6(4.7)
		Second gear		13.3(8.3)
		Third gear		22.3(13.9)
		Fourth gear		37.4(23.3)

3) WITH TOOTH TYPE BUCKET



Description		Unit	Specification	
Operating weight		kg(lb)	28905(63725)	
Bucket capacity	Struck	m ³ (yd ³)	4.0(5.2)	
	Heaped		4.7(6.2)	
Overall length	A	mm(ft-in)	9470(31' 1")	
Overall width	B		3500(11' 6")	
Overall height	C		3670(12' 0")	
Ground clearance	D		475(1' 7")	
Wheelbase	E		3700(12' 2")	
Tread	F		2440(8' 0")	
Dump clearance at 45°	G		3240(10' 8")	
Dump reach	H		1590(5' 3")	
Width over tires	I		3220(10' 7")	
Dump angle	J		Degree (°)	45
Roll back angle(Carry position)	K			48
Cycle time	Lift(With load)	sec	6.4	
	Dump(With load)		1.6	
	Lower(Empty)		3.6	
Maximum travel speed		km/hr(mph)	37.4(23.3)	
Braking distance		m(ft-in)	12(39' 4")	
Minimum turning radius(Center of outside tire)			6.43(21' 1")	
Gradability		Degree (°)	30	
Travel speed	Forward	First gear	7.6(4.7)	
		Second gear	13.3(8.3)	
		Third gear	22.3(13.9)	
		Fourth gear	37.4(23.3)	
	Reverse	First gear	7.6(4.7)	
		Second gear	13.3(8.3)	
		Third gear	22.3(13.9)	
		Fourth gear	37.4(23.3)	

3. WEIGHT

Item	kg	lb
Front frame assembly	2825	6228
Rear frame assembly	3174	6997
Front fender(LH & RH)	42	93
Counterweight	1200	2646
Cab assembly	1000	2205
Engine assembly	1348	2972
Transmission assembly	796	1755
Torque converter assembly	293	646
Drive shaft(Torque converter to transmission)	14	31
Drive shaft(Front)	30	66
Drive shaft(Center)	50	110
Drive shaft(Rear)	23	51
Front axle(Include differential)	1600	3527
Rear axle(Include differential)	1550	3417
Tire(4EA)	430	948
Hydraulic tank assembly	231	509
Fuel tank assembly	412	908
Main pump assembly	40	88
Main control valve	94	207
Flow amplifier	29	64
Boom	2070	4564
Bell crank	258	569
Bucket link	55	121
5.0m ³ bucket, with bolt on cutting edge	2540	5600
4.7m ³ bucket, with tooth	2310	5093
4.7m ³ bucket, without tooth and cutting edge	2120	4673
Boom cylinder assembly(2EA)	290	639
Bucket cylinder assembly(2EA)	150	331
Steering cylinder assembly(2EA)	65	143
Seat	40	88
Battery	55	121

4. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins NTA 855-C *Cummins N14-C
Type	4-cycle turbocharged, after cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	140 × 152mm(5.51" × 5.98")
Piston displacement	14010cc(854.9cu in)
Compression ratio	14.5 : 1
Rated gross horse power	340ps at 2100rpm
Maximum gross torque at 1400rpm	149kgf · m(1078lbf · ft) *156kgf · m
Engine oil quantity	40 l (10.6 U.S. gal)
Dry weight	1303kg(2872.6lb) *1322kg
High idling speed	2260 ± 50rpm
Low idling speed	800 ± 50rpm
Rated fuel consumption	158.8g/ps · hr *160.3g/ps · hr
Starting motor	Delco Remy 42MT(24V)
Alternator	DAC HC60(24V-60AMP)
Battery	2 × 12V × 200Ah

* : Low emission engine

2) MAIN PUMP

Item	Specification
Type	Fixed displacement tandem gear pump
Capacity	100cc/rev
Maximum operating pressure	210kgf/cm ² (2987psi)
Rated oil quantity	200 l /min(53U.S.gpm)
Rated speed	2100rpm

3) BRAKE PUMP

Item		Specification
Type		Fixed displacement tandem gear pump
Capacity		16cc/rev
Maximum operating pressure		150kgf/cm ² (2130psi)
Rated oil quantity		31.9 l /min(8.4U.S.gpm)

4) MAIN CONTROL VALVE

Item		Specification
Type		2 spool
Operating method		Hydraulic pilot assist
Main relief valve pressure		210kgf/cm ² (2987psi)
Overload relief valve pressure(Boom)		250kgf/cm ² (3556psi)
Overload relief valve pressure(Bucket)		230kgf/cm ² (3271psi)

5) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating	Minimum	5.8kgf/cm ² (82.5psi)
	Maximum	19kgf/cm ² (270psi)
Single operation stroke	Lever	70mm(2.8in)

6) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 200 × ∅ 110 × 863mm
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 160 × ∅ 80 × 580mm
Steering cylinder	Bore dia × Rod dia × Stroke	∅ 110 × ∅ 55 × 480mm

7) DYNAMIC POWER TRANSMISSION DEVICES

Item		Specification
Torque converter	Model	Clark 8602
	Type	Single-stage, single-phase
Transmission	Model	Clark 6421
	Type	Semi-automatic power shift
	Gear shift	Forward fourth gear, reverse fourth gear
	Adjustment	Electrical single lever type, kick-down system
Axle	Drive devices	4-wheel drive
	Front	Front fixed location
	Rear	Oscillation 13° of center pin-loaded
Wheels	Tires	29.5-25, 22PR(L3)
Brakes	Travel	Four-wheel, wet-disc type, full hydraulic
	Parking	Spring applied, hydraulic released brake on front axle
Steering	Type	Full hydraulic, articulated
	Steering angle	40° to both right and left angle, respectively

5. TIGHTENING TORQUE

The torques given are standard figures. Any figures specifically described in this manual has priority.

1) BOLT AND NUT

(1) Coarse thread

Bolt size	8T		10T	
	kgf · m	lbf · ft	kgf · m	lbf · ft
M 6 × 1.0	0.85 ~ 1.25	6.15 ~ 9.04	1.14 ~ 1.74	8.2 ~ 12.6
M 8 × 1.25	2.0 ~ 3.0	14.5 ~ 21.7	2.73 ~ 4.12	19.7 ~ 29.8
M10 × 1.5	4.0 ~ 6.0	28.9 ~ 43.4	5.5 ~ 8.3	39.8 ~ 60
M12 × 1.75	7.4 ~ 11.2	53.5 ~ 79.5	9.8 ~ 15.8	71 ~ 114
M14 × 2.0	12.2 ~ 16.6	88.2 ~ 120	16.7 ~ 22.5	121 ~ 167
M16 × 2.0	18.6 ~ 25.2	135 ~ 182	25.2 ~ 34.2	182 ~ 247
M18 × 2.5	25.8 ~ 35.0	187 ~ 253	35.1 ~ 47.5	254 ~ 343
M20 × 2.5	36.2 ~ 49.0	262 ~ 354	49.2 ~ 66.6	356 ~ 482
M22 × 2.5	48.3 ~ 63.3	350 ~ 457	65.8 ~ 98.0	476 ~ 709
M24 × 3.0	62.5 ~ 84.5	452 ~ 611	85.0 ~ 115	615 ~ 832
M30 × 3.5	124 ~ 168	898 ~ 1214	169 ~ 229	1223 ~ 1655
M36 × 4.0	174 ~ 236	1261 ~ 1703	250 ~ 310	1808 ~ 2242

(2) Fine thread

Bolt size	8T		10T	
	kgf · m	lbf · ft	kgf · m	lbf · ft
M 8 × 1.0	2.17 ~ 3.37	15.7 ~ 24.3	3.04 ~ 4.44	22.0 ~ 32.0
M10 × 1.25	4.46 ~ 6.66	32.3 ~ 48.2	5.93 ~ 8.93	42.9 ~ 64.6
M12 × 1.25	7.78 ~ 11.58	76.3 ~ 83.7	10.6 ~ 16.0	76.6 ~ 115
M14 × 1.5	13.3 ~ 18.1	96.2 ~ 130	17.9 ~ 24.1	130 ~ 174
M16 × 1.5	19.9 ~ 26.9	144 ~ 194	26.6 ~ 36.0	193 ~ 260
M18 × 1.5	28.6 ~ 43.6	207 ~ 315	38.4 ~ 52.0	278 ~ 376
M20 × 1.5	40.0 ~ 54.0	289 ~ 390	53.4 ~ 72.2	386 ~ 522
M22 × 1.5	52.7 ~ 71.3	381 ~ 515	70.7 ~ 95.7	512 ~ 692
M24 × 2.0	67.9 ~ 91.9	491 ~ 664	90.9 ~ 123	658 ~ 890
M30 × 2.0	137 ~ 185	990 ~ 1338	182 ~ 248	1314 ~ 1795
M36 × 3.0	192 ~ 260	1389 ~ 1879	262 ~ 354	1893 ~ 2561

2) PIPE AND HOSE

Thread size	Width across flat(mm)	kgf · m	lbf · ft
1/4"	19	3	21.7
3/8"	22	4	28.9
1/2"	27	5	36.2
3/4"	36	12	86.8
1"	41	14	101

3) FITTING

Thread size	Width across flat(mm)	kgf · m	lbf · ft
1/4"	19	4	28.9
3/8"	22	5	36.2
1/2"	27	6	43.4
3/4"	36	13	94.0
1"	41	15	109

4) TIGHTENING TORQUE OF MAJOR COMPONENT

No.	Items	Size	kgf · m	lbf · ft	
1	Engine	Engine mounting bolt, nut	M20×2.5	57.9 ± 8.7	419± 63
2		Radiator mounting bolt, nut	M12×1.75	12.3 ± 2.5	89.0± 18
3		Fuel tank mounting bolt	M20×2.5	57.9 ± 8.7	419± 63
4	Hydraulic system	Main pump housing mounting bolt	1/2-13UNC	12.8 ± 3	92.6± 22
5		Steering pump housing mounting bolt	1/2-13UNC	12.8 ± 3	92.6± 22
6		Main control valve mounting bolt	M12×1.75	12.8 ± 3	92.6± 22
7		Steering unit mounting bolt	M10×1.5	6.9 ± 1.4	49.9± 10
8		Flow amplifier mounting bolt	M10×1.5	6.9 ± 1.4	49.9± 10
9		Brake valve mounting bolt	M 8×1.25	2.5 ± 0.5	18.1± 3.6
10		Cut-off valve mounting bolt	M 8×1.25	2.5 ± 0.5	18.1± 3.6
11		Remote control lever mounting bolt	M 6×1.0	1.1 ± 0.2	8.0± 1.4
12		Pilot supply unit mounting bolt	M 8×1.25	2.5 ± 0.5	18.1± 3.6
13		Safety valve	M 8×1.25	2.5 ± 0.5	18.1± 3.6
14		Hydraulic oil tank mounting bolt	M20×2.5	57.9 ± 8.7	419 ± 63
15	Power train system	Transmission mounting bolt	M22×2.5	48.0± 2	347 ± 14
16		Front axle mounting bolt	M33×2.0	225± 25	1627±181
17		Rear axle support mounting bolt, nut	M33×2.0	225± 25	1627±181
18		Tire mounting nut	M22×1.5	48.5± 2.5	351± 18
19		Drive shaft joint mounting bolt, nut	1/2-13UNC	12.3± 2	89.0± 14
20	Others	Counterweight mounting bolt	M30×3.5	199 ± 29.9	1439±216
21		Operator's seat mounting bolt	M 8×1.25	3.4 ± 0.8	24.6± 5
22		ROPS Cab mounting bolt(4EA)	1.25-12UNF	126	910

6. RECOMMENDED LUBRICANTS

Use only oils listed below or equivalent.

Do not mix different brand oil.

Service point	Kind of fluid	Capacity l (U.S. gal)	Ambient temperature °C (°F)								
			-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)	40 (104)		
Engine oil pan	Engine oil	40(10.6)					SAE 30				
			SAE 10W								
			SAE 10W-30								
			SAE 15W-40								
Transmission	Oil	60(15.9)	DEXRON II								
Axle	Gear oil	Front : 50(13.2) Rear : 50(13.2)	SAE 80W-90LSD/API GL-5								
Hydraulic tank	Hydraulic oil	Tank: 210(55.5) System: 260(68.7)	ISO VG 32								
			ISO VG 46								
			ISO VG 68								
Fuel tank	Diesel fuel	470(124)	ASTM D975 NO.1								
			ASTM D975 NO.2								
Fitting (Grease nipple)	Grease	As required	NLGI NO.1								
			NLGI NO.2								
Radiator	Mixture of antifreeze and water 50 : 50	73(19.3)	Ethylene glycol base permanent type								